

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
23 October 2003 (23.10.2003)

PCT

(10) International Publication Number
WO 2003/088136 A3

(51) International Patent Classification⁷: **G06F 3/033**

(21) International Application Number:
PCT/IL2003/000309

(22) International Filing Date: 14 April 2003 (14.04.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/372,197 15 April 2002 (15.04.2002) US
60/425,304 12 November 2002 (12.11.2002) US

(71) Applicant (for all designated States except US): **EPOS TECHNOLOGIES LIMITED** [GB/GB]; "Trident Chambers", P. O. Box 146, Road Town, Tortola (VG).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **ALTMAN, Nathan** [IL/IL]; 39 Hashmonaim Street, 64 251 Tel Aviv (IL).
ELIASHIV, Oded [IL/IL]; 1 Moshe Aram Street, 69 353 Tel Aviv (IL).

(74) Agent: **G. E. EHRLICH (1995) LTD.**; Ayalon Tower, 11 Menachem Begin Street, 52521 Ramat-Gan (IL).

(81) Designated States (national): AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA,

CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK (utility model), SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
28 October 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD AND SYSTEM FOR OBTAINING POSITIONING DATA

(57) Abstract: A position detection system for use in association with computing applications, the system comprising: a positional element for attaining a position and comprising a first emitter for emitting a substantially continuous ultrasonic waveform decodable to fix said position, and a detector arrangement for detecting said waveform in a manner permitting fixing of said position and outputting said waveform for computation, in a manner retentive of said position fixing ability.



WO 2003/088136 A3

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IL 03/00309

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G06F3/033

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G06F G06K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data, COMPENDEX, INSPEC, IBM-TDB

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	NONAKA H ET AL: "Ultrasonic position measurement and its applications to human interface" INSTRUMENTATION AND MEASUREMENT TECHNOLOGY CONFERENCE, 1994. IMTC/94. CONFERENCE PROCEEDINGS. 10TH ANNIVERSARY. ADVANCED TECHNOLOGIES IN I & M., 1994 IEEE HAMAMATSU, JAPAN 10-12 MAY 1994, NEW YORK, NY, USA, IEEE, 10 May 1994 (1994-05-10), pages 753-756, XP010121966 ISBN: 0-7803-1880-3	1,20, 31-33, 36,49, 73,76, 78-80, 87-89
A	the whole document ----- -/--	21,34, 47,90, 98,100



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

16 September 2004

Date of mailing of the international search report

22/09/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Taylor, P

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IL 03/00309

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 814 552 A (STEFIK ET AL.) 21 March 1989 (1989-03-21)	1-3, 20, 23-25, 31-34, 36, 47-49, 55, 65, 73, 98, 100
A	abstract column 2, line 30 - line 68 column 4, line 37 - line 51 column 5, line 19 - line 31 column 6, line 66 - column 8, line 2; figures 1A, 1B, 2C, 4A, 8	6, 7, 9, 10, 14, 15, 21, 43, 46, 74-76, 78-80, 83-90, 96
X	WO 00/21203 A (COMSENSE TECHNOLOGIES LTD) 13 April 2000 (2000-04-13)	1-4, 16, 20, 26-34, 36, 46, 47, 49, 58, 73-80, 87-90, 98, 100, 101
A	page 3, line 10 - line 17 page 4, line 29 - page 5, line 8 page 9, line 27 - page 10, line 5 page 11, line 3 - line 10 page 18, line 2 - line 22 page 21, line 1 - line 14 page 25, line 8 - line 16; figure 1	18, 21, 23, 24, 59, 70
X	US 5 142 506 A (EDWARDS) 25 August 1992 (1992-08-25)	1-5, 20, 26, 36, 45, 57, 73-75
A	column 3, line 20 - column 4, line 57 column 5, line 45 - column 7, line 10 column 9, line 28 - line 49; figures 1-3, 9	21, 27, 29-34, 49, 51, 76-80, 87-90, 93
	-/--	

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IL 03/00309

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 666 543 A (INVIBRO TECHNOLOGIES LTD.) 9 August 1995 (1995-08-09)	1, 3, 20, 36, 45, 73, 76, 79, 80, 83, 84, 86
A	page 9, line 26 - page 11, line 7; figure 1B -----	23, 24, 55, 96, 98, 100

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IL 03/00309

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4814552	A	21-03-1989	NONE	
WO 0021203	A	13-04-2000	AU 2455700 A	05-06-2000
			AU 5881999 A	03-04-2000
			AU 5996899 A	26-04-2000
			AU 5997299 A	26-04-2000
			CA 2343897 A1	23-03-2000
			CA 2345736 A1	13-04-2000
			CA 2345745 A1	13-04-2000
			CA 2350761 A1	25-05-2000
			EP 1123148 A2	16-08-2001
			EP 1192520 A2	03-04-2002
			EP 1116155 A2	18-07-2001
			EP 1121763 A1	08-08-2001
			WO 0029920 A2	25-05-2000
			WO 0021203 A1	13-04-2000
			WO 0021020 A2	13-04-2000
			JP 2002536031 T	29-10-2002
			JP 2002527012 T	20-08-2002
			JP 2002527926 T	27-08-2002
			JP 2003531505 T	21-10-2003
			US 6607136 B1	19-08-2003
			AU 5441899 A	21-03-2000
			CA 2341907 A1	09-03-2000
			EP 1108224 A2	20-06-2001
			JP 2002525591 T	13-08-2002
			US 2004031856 A1	19-02-2004
US 5142506	A	25-08-1992	CA 2094615 A1	23-04-1992
			EP 0554346 A1	11-08-1993
			IE 913686 A1	22-04-1992
			JP 6502509 T	17-03-1994
			WO 9207346 A1	30-04-1992
EP 0666543	A	09-08-1995	AT 219588 T	15-07-2002
			AU 1154895 A	17-08-1995
			CA 2141836 A1	05-08-1995
			CN 1128380 A	07-08-1996
			DE 69527101 D1	25-07-2002
			DE 69527101 T2	02-01-2003
			EP 0666543 A2	09-08-1995
			JP 8036462 A	06-02-1996
			TW 403877 B	01-09-2000
			US 5517579 A	14-05-1996
			ZA 9500811 A	18-07-1996